

112-3-5719

Computation of Limiting Overheating and Thermal Impairing (Cont.)

constant rated load); $k_f = \frac{S_e}{S_{av}}$ - curve form factor;

$\beta = \frac{S_{av}}{S_r}$ - average duty factor of the transformer,

where S_c - mean quadratic load; S_{av} - average load as

plotted on a daily graph; S_r - rated power of transformer. The nomogram permits the following general conclusions to be drawn. 1. The most important factor in selecting transformer power is the thermal impairing of the insulation, not the limiting heating up temperature. 2. Insulation impairing close to the natural wear with a variable load can be obtained if temperature rises above the rated (105°) are permitted. 3. An increase in k_f and β greatly increases the thermal impairing. The nomogram and load chart can be used for finding the degree of thermal impairing of transformer insulation, and for selecting transformer power on the basis of a definite thermal impairing factor of insulation.

ASSOCIATION: Novocherkassk Polytechnical Institute (Novocherkas. N.L.G. politekhn. in-t)

Card 2/2

Kayalov, G.M.

GITEL'SON, S.M.; KAYALOV, G.M.

Economic evaluation of methods of increasing $\cos \phi$ in industrial plants. Energ. biul. no. 5:15-18 My '57. (MIREA 10:6)
(Electric power)

KAYALOV, G.M.

On S.A. Kudriashov's remarks. Energ. biul. no.5:21-22 My '57.
(Electric power) (Kudriashov, S.A.) (MIRA 10:6)

AUTHOR:

Kayalov, G.M.

SOV/90-58-1-1/9

TITLE:

On Calculating the Reactive Electric Power Needed by Industrial Electric Motors (K raschëtu potrebleniya reaktivnoy elektroenergii promyshlennymi elektroprivodami)

PERIODICAL:

Energeticheskiy byulleten', 1958, Nr 1, pp 1-4 (USSR)

ABSTRACT:

Difficulties arise in the designing of industrial-plant electric equipment and in the rising of the power factor. These difficulties concern the calculation of reactive electric power consumption. Experimental determination of the amounts of reactive electric power needed by basic consumers (asynchronous motors) also faces some difficulties. The author therefore gives a formula which expresses the interdependence between the reactive-power utilization factor on the one hand, and the switch-in factor as well as the active-power utilization factor on the other. He also gives another variant of the same formula, applicable to an entire line of motors. At the end he derives formulas applicable for calculating the average power factor of asynchronous motors in

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On Calculating the Reactive Electric Power Needed by Industrial Electric Motors

correlation with switch-in factors and active-power utilization coefficients.

There is 1 table and 3 Soviet references.

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Kayalov, G.M.

94-1-15/24

AUTHOR: Kayalov, G.M., Candidate of Technical Sciences

TITLE: On a Scale of Standard Voltages for Industrial Distribution Systems and Electrical Equipment (O shkale standartnykh napryazheniy dlya promyshlennyykh elektrosetey i priyemnikov)

PERIODICAL: Promyshlennaya Energetika, 1958, No.1,
pp. 31 - 33 (USSR)

ABSTRACT: This is a discussion of an article by Yu.L. Mukoseyev - "Promyshlennost' trebuyet napryazheniya 660/380 V" - Promyshlennaya Energetika, 1956, No.8. The desirability of a standard distribution voltage of 15 kV was discussed in 1947 by G.V. Serbinovskiy and Yu.N. Baskakov (Elektrichestvo, 1947, No.1). The author then argues the merits and demerits of 35 kV as an industrial distribution voltage and considers that it is too high except for a few special cases where very large loadings are involved. However, the next standard voltage, 10 kV, is often inconveniently low. More attention should be paid to the possibility of using 15 kV for industrial distribution. The value of 660 V recommended for supply to large equipment (above 100 kW) is not a good one. It would be better to use the standard voltages of 3 or 6 kV. A number of other remarks are made about the selection of voltage for industrial distribution. There is an editorial note than an expert commission of the

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94-1-15/24

On a Scale of Standard Voltages for Industrial Distribution Systems
and Electrical Equipment

Committee of Standards, Weights and Measuring Instruments examined the draft standard "Rated Voltages for Electric Power Systems and Connected Equipment" and recommended the inclusion of a voltage of 21 kV for generators (instead of 15 kV) in order to be able to supply directly a number of large urban and industrial loads without transformers. It was also recommended to include the voltage of 660 V to meet the needs of the mining industry.

ASSOCIATION: Novocherkassk Polytechnical Institute (Novocherkasskiy politekhnicheskiy institut)

AVAILABLE: Library of Congress
Card 2/2

KAYALOV, Georgiy Mikhaylovich, kand.tekhn.nauk, dots.

Load of electric networks used for mass and automatized production.
Izv. vys. ucheb. zav.; elekromekh. 1 no.6:108-114 '58.
(MIRA 11:9)

1. Kafedra elektrifikatsii promyshlennyykh predpriyatiy Novo-
cherkasskogo politekhnicheskogo instituta.
(Electric networks)

SOV/112-59-5-8888

8(3)

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 5,
pp 66-67 (USSR)

AUTHOR: Kayalov, G. M.

TITLE: Using the Probability Theory in the Analysis of Industrial Loads

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Elektromekhanika, 1958, Nr 1,
pp 114-123

ABSTRACT: Direct calculation of load is necessary for fairly large receivers; however, it is unsuitable in evaluating a mass of receivers. For the latter case, using the probability theory and mathematical statistics is expedient at all stages of load-calculation procedure: (1) investigating existing relationships; (2) developing design formulae; (3) deriving the numerical data that would determine the design load from experimental data. The contradiction between the complicated initial physical relationships and the required simplicity of mass calculations necessitates a certain compromise in the final

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Novocherkasskij Polytech. INST.

Using the Probability Theory in the Analysis of Industrial Loads

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correlation function $B(\tau) = \lim_{T \rightarrow \infty} \frac{1}{T} \int_0^T P(t)P(t + \tau)dt.$ The latter provides a numerical evaluation of the correlation between the load curve values shifted in time by any stretch $\tau = \text{const.}$ It is essential that $B_0 = P_e^2$, $B(\infty) = P_{sr}^2$, where P_e and P_{sr} are the effective and average values of the load. The expressions $B(\tau)$ for the simplest single-receiver curves and for the total load curve are given. Sample curves for which $P_{\Theta_{\max}}$ varies on a nonmonotonic pattern with the increase of Θ are presented; however, the dispersion of the random value P_{Θ} decreases always monotonically.

Bibliography: 8 items.

G. M. K.

Card 3/3

KAYALOV, Georgiy Mikhaylovich, kand. tekhn. nauk, dots.

Calculated values of load variations in industrial electric networks.
Inv. vys. ucheb. zav.; elektromekh. 1 no.3:123-129 '58. (MIRA 11:6)

1. Kafedra elektrifikatsii promyshlennyykh predpriyatiy Novocherkasskogo politekhnicheskogo instituta.
(Electric networks)

6/11/86, G.M.

AUTHOR: Kayalov, G.M. 90-58-4-3/6

TITLE: Economic Solutions to the Supplying of Industrial Plants With Electric Power (Ob ekonomicheskikh resheniyakh v elek-trosnabzhenii promyshlennyykh predpriyatiy)

PERIODICAL: Energeticheskiy Byulleten', 1958, Nr 4, pp 21-28 (USSR)

ABSTRACT: Calculations of the costs of supplying industrial plants with electricity are mostly based on operation costs, amortization, etc. In the article the different factors determining such calculations are discussed. An important economic factor is the initial capital investment of any electric current supply system. The problem of correlating the initial and current expenditures is not yet completely solved. The opening of new coal mines belongs also to the initial capital investment. The specific initial investment regarding electric power stations alone amounts to 1,200 - 3,000 rubels per kw. The investment regarding the opening of coal mines is approximately 490 rubels per kw. The amortization deductions are a part of the current expenditures and give no return. It is important to know, if the initial capital investment should be kept low although the current expenditures are later increased by this

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90-58-4-3/6

Economic Solutions to the Supplying of Industrial Plants With Electric Power

method; or if the initial investment should be high so that the current expenditures may be kept low. These considerations are influenced by the amortization term which must be determined separately in every case. In the Soviet Union, an important role is played by the factor of socialist accumulation; for the calculation of this formulas are given. It is admitted that there are often differences between the actual costs of the final product, raw materials, etc., and the costs determined by the price lists. If the reliability and the steadiness of operation of different systems is the same, it remains to be considered in which system the energy losses and the need of non-ferrous metals is lowest. It is expedient to choose a solution which involves a somewhat increased current expenditure, to save a greater quantity of nonferrous metals. In comparison to municipal power lines, the industrial lines have a load limit which is easily reached; they are not very long and auxiliary lines may be laid without much expenditure when needed; the loss of voltage is low. The increase of the cross section of these lines beyond minimum

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Economic Solutions to the Supplying of Industrial Plants With Electric Power

requirements is admissible only if there are concrete economic reasons for it. The distribution of a certain quantity of nonferrous metals between several power lines should be made according to their economic cross sections without regard to their length.

There are 14 Soviet references.

AVAILABLE: Library of Congress

Card 3/3 1. Electrical systems-Economic aspects

KAYALOV, Georgiy Mikhaylovich, dotsent, kand.tekhn.nauk

Determining the effective number of receivers in calculations of
industrial electric networks. Izv.vys.ucheb.sav.; elektro-mekh.
3 no.1:120-125 '60. (MIHA 13:5)

1. Kafedra elektrifikatsii promyshlennykh predpriyatiy
Novocherkasskogo politekhnicheskogo instituta.
(Electric networks)

KAYALOV, Georgiy Mikhaylovich, kand.tekhn.nauk, dotsent

Rational scientific methods based on three present-day techniques
for the approximate integration of equations in the theory of
automatic control. Izv. vys. ucheb. zav.; elektromekh. 3 no.3:
140-143 '60. (MIRA 13:10)

1. Kafedra elektrifikatsii promyshlennykh predpriyatiy Novocher-
kasskogo politekhnicheskogo instituta.
(Automatic control) (Calculus, Operational)

AVILOV-KARNAUKHOV, Boris Nikolayevich, doktor tekhn.nauk, prof.; KAYALOV,
Georgiy Mikhaylovich, kand.tekhn.nauk, dotsent; BRUSENTSOV,
Leоніг Vasili'yevich, assistant; SHALYGIN, Igor'Vladimirovich,
assistant

Devices for studying the long-term processes. Izv. vys. uchab.
zav.; elektronika. 3 no. 7-92-98 '60. (MIR 13:9)

1. Zaveduyushchiy kafedroy elektrifikatsii promyshlennykh
predpriyatiy Novocherkasskogo politekhnicheskogo institut (for
Avilov-Karnaukhov).
2. Novocherkasskiy politekhnicheskiy institut
(for Kayalov).
3. Kafedra elektrifikatsii promyshlennykh predpriyatiy Novo-
cherkasskogo politekhnicheskogo institut (for Brusentsov).
4. Kafedra elektrifikatsii promyshlennykh predpriyatiy Novo-
cherkasskogo politekhnicheskogo institut (for Shalygin).

(Recording instruments)

S/144/60/000/05/012/014
E194/E255

AUTHORS: Kayalov, G. M., Candidate of Technical Sciences, and
Brusentsov, L. V.

TITLE: Correlation Functions of Load Curves of the Electrical
Drives of Machine Tools and Their Practical Significance

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,
Elektromekhanika, 1960, Nr 5, pp 123-129 (USSR)

ABSTRACT: The meaning of the term "correlation function" is first defined; it is a limit of the form given by expression (1). Correlation functions are becoming widely used for a variety of purposes, including analysis and calculation of the loads on industrial electrical systems. The correlation function gives the variation of possible mean values of load over a given time interval. Thus if the statistical three sigma rule may be used to calculate maximum loads of any duration, such as half an hour or fifteen minutes. Moreover, knowledge of the correlation function of load curves of individual current-consuming devices is very useful for assessing whether the manufacturing process is sufficiently

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E194/E255

Correlation Functions of Load Curves of the Electrical Drives of Machine Tools and Their Practical Significance

rhythmic and organised. The present article considers both these applications of the correlation function. Hitherto, the correlation functions of load curves of industrial electric power systems have not been studied experimentally: the authors describe such a study carried out in the machine shops of an Electric Locomotive Works and of a Tractor Works. The measurements in the shops were carried out by a student A. Derevyanchenko and Engineer S. Pronin. Determination of each individual point on the curve of the correlation function requires laborious integration and the work was greatly facilitated by the use of two special semi-automatic measuring instruments designed by one of the present authors. These instruments, a recorder and an analyser, were described in Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, Nr 8, 1958. The recorder was used to determine the load curves in the form of special photographs and the analyser was used as a correlator to make automatic calculations of the right-hand side of formula (1). In practice, the infinite

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Correlation Functions of Load Curves of the Electrical Drives of
Machine Tools and Their Practical Significance

limits of integration given in formula (1) must be replaced by finite limits. Figs 1a and 3a give typical examples of correlation function curves for the individual load curves of machine tools determined in this way. If the machine is running rhythmically, that is, if the load curve is strictly periodic, the correlation function is also periodic. In practice, this applies only to automatic machines: in other cases the duration of the operating cycle varies in a random manner from one cycle to the next. Therefore, the correlation function of the individual load curve is no longer periodic but ranges between the rms and the mean ordinates of the load curve during the shift. Figs 1b and 3b give curves of the distribution of the duration of an individual cycle obtained directly from the load curves of individual machines. The actual load curves are not given because their shape during a single cycle of the machine tool does not influence the damping time of the correlation function curve. It will be seen that the graph of Fig 1a,

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which corresponds to a relatively small dispersion in the value of the cycle time (see Fig 1b) has the most nearly periodic correlation function. A summated effect arises from the super-position on a strictly periodic but weak signal of stronger irregular interference. If graphs of the correlation functions are constructed, they can be used to reveal the presence of the signal and to determine its periodicity from the periodicity of the damped wave of the correlation function. This principle may be used to detect machine stoppages in the common case when the dispersion is relatively great and the stops are relatively small. Under such conditions, it is difficult to establish the presence and duration of stops directly from the load curve and the indirect method is to be preferred. First the mean value of the duration of the cycle is determined. It corresponds to the required normal law on a load curve without stoppages, and suffices to determine the period of damped waves on the correlation function graph. Then, on the experimental distribution curve, experimental values of the cycle time

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are laid off from the origin to determine the mean value of the standing time. It has been found that variations in the cycle time depend almost entirely on variations in the stopping time, whilst the time which the machines are in operation is usually constant. This has been observed in many workshops and it also applies to the load curves of underground sub-stations in coal mines. Fig 4 shows the correlation function of a feeder load curve which is aperiodic, whilst that in Fig 5 contains a damped periodic oscillation associated with the presence in the load of one large item of current-consuming apparatus. In general, the presence of damped waves in the graph of the correlation function of the total load of a group of power-consuming equipment has no important influence on the dispersion of the mean loads over particular intervals of time. If there are waves in the graph the envelopes of the maxima and minima may have different time-constants, as may be seen in the graphs of Figs 3a and 5. Attempts by the authors to obtain a simple graphical experimental relationship between the time

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S/144/60/C00/05/012/01:
E194/E255

Correlation Functions of Load Curves of the Electrical Drives of
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constant of damping of the correlation relationships
and other constants was unsuccessful; but in no case did
the ratio of this time constant to the cycle time
exceed 4, so that expression (5) was generally valid.
The method of using the data obtained in the present
article to calculate the loading of industrial electric
power systems falls outside the scope of the present
article. There are 5 figures and 6 Soviet references.

ASSOCIATION: Novocherkasskiy politekhnicheskiy institut
(Novocherkassk Polytechnical Institute)

SUBMITTED: January 28, 1960

Card 6/6

KAYALOV, G.M.

Principles of constructing the electric networks of industrial enterprises in the U.S.S.R. Izv. vys. ucheb. zav.; elekromekh.
4 no. 1:100-112 '61. (MIRA 14:4)
(Electric power distribution)

KAYALOV, Georgiy Mikhaylovich, kand.tekhn.nauk, dotsent

Rated load of the feeder of an electric network and a method
for calculating it for a given graph. Izv. vys. ucheb. zav.;
elektromekh. 4 no.4:114-131 '61. (MIRA 14:7)

1. Kafedra elektrifikatsii promyshlennykh predpriyatiy
Novosibirskogo politekhnicheskogo instituta.
(Electric power distribution)

KAYALOV, Georgiy Mikhaylovich, kand.gekhn.nauk, dotsent

Theory of random processes and calculation of the loads of industrial electric networks. Izv. vys. ucheb. zav.; elektromekh. 4 no.12: 13-21 '61. (MIRA 15:1)

1. Kafedra elektrifikatsii promyshlennyykh predpriyatiy Novocherkasskogo politekhnicheskogo instituta.
(Electric power distribution)

KAYALOV, GEORGIY MIKHAYLOVICH, kand.tekhn.nauk, dotsent

Theory of random processes and calculation of the loads of
electrical networks of factories. Izv. vys. ucheb. zav.;
elektromekh. 4 no.11:65-81 '61. (MIRA 14:12)

1. Kafedra elektrifikatsii promyshlennyykh predpriyatiy
Novocherkasskogo politekhnicheskogo instituta.

(Electric networks)

(Electric power distribution)

KIZEVETTER, Ye.N.; KLEYN, P.N.; KHARCHEV, M.K. [deceased];
VOLOBRINSKIY, S.D.; GRODSKIY, S.Ye.; YERMILOV, A.A.;
KAYALOV, G.M.; LIVSHITS, D.S.; MAKSIMOV, A.A.; MESHEL',
B.S.; MUKOSEYEV, Yu.L.; OGORODNOV, S.I.; ROZENBERG, V.A.;
SHRAYBER, L.G.; ZALESSKIY, Yu.Ye., retsentent; IOKHVIDOV,
E.S., retsentent; FEDOROV, A.A., retsentent; SAVEL'YEV,
V.I., red.; LARIONOV, G.Ye., tekhn. red.

[Temporary instructions for determining the electrical loads
of industrial enterprises] Vremennye rukovodashchie ukaza-
niia po opredeleniiu elektricheskikh nagruzok promyshlennykh
predpriatii. Moskva, Gosenergoizdat, 1962. 45 p.

(MIRA 16:2)

1. Russia (1923- U.S.S.R.) Glavnoye energeticheskoye uprav-
leniye. 2. Leningradskoye otdeleniye Gosudarstvennogo pro-
yektnogo instituta tyazheloy promyshlennosti (for Kizevetter,
Kleyn, Kharchev). 3. Komissiya po elektricheskim nagruzkam
Nauchno-tehnicheskogo obshchestva energeticheskoy promyshlennosti
(for Volobrinskiy, Grodskiy, Yermilov, Kayalov, Livshits,
Maksimov, Meshel, Mukoseyev, Ogorodnov, Rozenberg, Shrayber).
(Electric power distribution)

KAYALOV, G.M., kand. tekhn. nauk

Calculation of electrical loads of industrial enterprises.
Prom. energ. 18 no.12:38-39 D '63. (MIRA 17:1)

VOLOBRINSKIY, Sergey Davidovich; KAYALOV, Georgiy Mikhaylovich;
KLEYN, Petr Nikolayevich; MESHEL', Boris Solomonovich;
SYROMYATNIKOV, I.A., prof., retsentent; KNYAZEVSKIY, B.A.,
dots., retsentent; GRODSKIY, S.Ye., red.

[Electrical loads of industrial enterprises] Elektricheskie
nagruzki promyshlennyykh pred "iiatii. [By] S.D.Volobrinskii
i dr. Moskva, Izd-vo "Energiia," 1964. 303 p.
(MIRA 17:8)

KAYALOV, Georgiy Mikhaylovich, kand.tekhn.nauk, dotsent

Principle of the maximum mean load in the calculation of
electrical networks. Izv.vys.ucheb.zav.; elektromekh. 7 no. 3:
367-374 '64. (MIRA 17:5)

1. Kafedra elektrifikatsii promyshlennnykh predpriyatiy
Novocherkasskogo politekhnicheskogo instituta.

AVILOV-KARNAUKHOV, B.N.; BOGUSH, A.G.; BOLYAYEV, I.P.; GIHIS, A.F.; DROZDOV,
A.D.; KAYALOV, G.M.; MIRONOV, Ye.P.; MIKHAYLOV, D.I.; SEKRETEV, D.I.;
SINEL'NIKOV, Ye.M.; CHERNYAVSKIY, F.I.

An outstanding scientist; on professor A.G.Beliaevskii's 80th
birthday. Izv.vys.ucheb.zav.; elektromekh. 7 no.11:1399-1400
'64. (MIRA 18:3)

OGORODNOV, S.I., inzh.; KAYALOV, G.M., doktor tekhn. nauk; GRODSKIY, S.Ye., inzh.;
VOLOBRINSKIY, S.D., kand. tekhn. nauk

Methods for calculating the electrical loads of industrial enterprises.
Prom. energ. 20 no.5:33-42 My '65. (MIRA 18:7)

1. Gor'kovskiy avtomobil'nyy zavod (for Ogorodnov). 2. Novocherkasskiy
politekhnicheskiy institut (for Kayalov). 3. Gosudarstvennyy institut
po proyektirovaniyu traktornoy promyshlennosti i sel'skokhozyaystvennogo
mashinostroyeniya (for Grodskiy).

KAYALOV, Georgiy Mikhaylovich, doktor tekhn. nauk, prof.; KURENNYY,
Eduard Grigor'yevich, aspirant

Experimental determination of the statistical indexes of electric
load graphs. Izv. vys. ucheb. zav.; elektrcmekh. 8 no.1:95-101 '65.
(MIRA 18:3)
1. Kafedra elektrifikatsii promyshlennnykh predpriyatiy.

VOLOBRIINSKIY, S.D.; KAYALOV, G.M.; KLEYN, P.N.

Reply to D.S.Livshits's remarks on the discussion on the methodology
for determining the loads of industrial electrical distribution
networks of plants. Elektrichestvo no.5/88-89 My '65.
(MIRA 18:6)

KAYALOV, Georgiy Mikhaylovich, doktor tekhn.nauk; KURENNYY, Eduard Grigor'yevich,
aspirant

Use of the queueing theory in calculating peak loads of industrial
electric power distribution networks. Izv.vys.ucheb.zav.; elektromekh.
8 no.7:803-815 '65. (MIRA 18:8)

1. Rostovskiy institut inzhenerov zheleznyodorozhnogo transporta
(for Kayalov). 2. Kafedra elektrooborudovaniya promyshlennyykh
predpriyatii Novocherkasskogo politekhnicheskogo instituta (for
Kurennyy).

KAYALOV, G.M., doktor tekhn.nauk, prof.

Bibliography. Elektrичество no.10:93-94 0 '65.

(MTRA 18:10)

AVILOV-KARNAUKHOV, B.N.; BATURO, V.I.; BAKHVALOV, Yu.A.; BOGUSH, A.G.;
BOLYAYEV, I.P.; GIKIS, A.F.; DROZDOV, A.D.; KAYALOV, G.M.; KLEYMENOV,
V.V.; KOLESNIKOV, E.V.; MALOV, D.I.

Professor Efim Markovich Sinel'nikov, 1905- ; on his 60th birthday.
Elektrichestvo no.9:89 S '65.

(MIRA 18:10)

L 22425-66 EWT(d)/EWP(k)/EWP(l)
ACC NR: AP6013623

SOURCE CODE: UR/0105/65/000/009/0089/0090

AUTHOR: Avilov-Karnaukhov, B. N.; Baturo, V. I.; Bakhvalov, Yu. A.; Bogush, A. G.; Bolyayev, I. P.; Gikis, A. F.; Drozdov, A. D.; Kayalov, G. M.; Kleymenov, V. V.; Kolesnikov, E. V.; Malov, D. I.

ORG: none

TITLE: Honoring the 60th birthday of Professor Yefim Markovich Sinel'nikov

SOURCE: Elektrichestvo, no. 9, 1965, 89-90

TOPIC TAGS: academic personnel, electric enginering personnel, computer research

ABSTRACT: Professor Sinel'nikov was born 11 May 1905 in Yekaterinoslav (now Dnepropetrovsk) in the family of a clerk. Following his graduation from the Khar'kov Electrical Engineering Institute in 1930 he was appointed chief of the Technical Division on Electric Drive at the Khar'kov Electrical Machinery Plant. Subsequently he was appointed research engineer at the Vol'ta Plant and later on transferred to Moscow, to the Institute of Experimental Medicine, while at the same time he continued his studies. In 1946 he started working as a senior scientific researcher at the All-Union Electrical Engineering Institute. Since September 1953 Professor Sinel'nikov has been working at the Novocherkassk Polytechnic Institute. At present he is head of the Chair of

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UDC: 621.313

L 22425-66

ACC NR: AP6013623

Electrical Machinery, Apparatus, and Computers and Mathematical Devices. He has been instrumental in establishing the computer laboratory at this institute, where research is being performed on the problems of utilizing computer engineering in the design and calculation of electromagnetic, mechanical, and thermal processes in electrical machinery and equipment. Since 1958 Professor Sinel'nikov has been Coordinating Editor of the journal Elektro-mekhanika (Electromechanics) - one of the series published under the aegis of Izvestiya Vysshikh Uchebnykh Zavedeniy (News of Higher Schools). Yefim Markovich is moreover a prominent educator and the holder of many social honors and consultant to a series of industrial enterprises. For his great merits as an educator and for his scientific contributions he has been awarded the Order of Labor Red Banner. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 09 / SUBM DATE: none

Card 2/2 (u)

KAYALOVA, S.S.

Chem 4

3

Journal of the American Ceramic Society
Vol. 37 No. 4
Apr. 1, 1954
Glass

Surface tension of silicate melts. A. A. APPEN, K. A. SHISHOV,
AND S. S. KAYALOVA. *Zhur. Fiz. Khim.*, 26, 131-38 (1952);
translated in *Silikattech.*, 4 [3] 104-105 (1953).—The surface
tension of 150 silicate melts of the types $x\text{Me}_2\text{O}\cdot y\text{MeO}\cdot z\text{SiO}_2$
and $x\text{Me}_2\text{O}\cdot y\text{MeO}\cdot k\text{Me}_n\text{O}_n\cdot z\text{SiO}_2$, containing at least 50 mole %
 SiO_2 , was tested by the drop weight method of Harkins and
Brown, and the results are given in a table. The surface tension
decreases in the order $\text{Li}^+ \rightarrow \text{Na}^+ \rightarrow \text{K}^+$, i.e., with increasing radius
of the cation; for bivalent metals the order is $\text{Mg}^{2+} \rightarrow \text{Ca}^{2+} \rightarrow$
 $\text{Sr}^{2+} \rightarrow \text{Ba}^{2+}$ and $\text{Zn}^{2+} \rightarrow \text{Cd}^{2+}$. For cations of the Fe group the
surface tension decreases with decreasing cation radius, $\text{Fe}^{2+} \rightarrow$
 $\text{Co}^{2+} \rightarrow \text{Ni}^{2+}$. The surface tension of a Pb glass of 33.8 SiO_2 , 62
 PbO , and 4.2% K_2O can be reduced by the addition of WO_3 and
 MO_2 and less so by Cr_2O_3 and V_2O_5 . M.H.A.

5-21-54 muf

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721220007-0

KAM TATA 55

APPROVED FOR RELEASE: 06/13/2000

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"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721220007-0

6/13

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721220007-0"

AUTHORS: Tokareva, I. V., Bergman, A. G., Sov/78-5-9-31/48
Kayanlova, S. S.

TITLE: Reciprocal System of Nitrates and Chlorides of Sodium and Calcium (Vzaimnaya sistema iz nitratov i khloridov natriya i kal'tsiya)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol. 3, Nr. 8, pp. 1909-1913 (USSR)

ABSTRACT: Details were given of the experimental examinations of the reciprocal system of nitrates and chlorides of sodium and calcium in the presence of solvents. These examinations were performed by means of visual-polythermal methods. The system $\text{Na}, \text{Ca} \parallel \text{Cl}, \text{NO}_3$ is comparatively simple and the components forming the system do not react with each other by forming complex compounds and solid solutions. This system is analogous to the systems: $\text{Na}, \text{Sr} \parallel \text{Cl}, \text{NO}_3$ and $\text{Na}, \text{Ba} \parallel \text{Cl}, \text{NO}_3$. The results demonstrate that the reciprocal system $\text{Na}, \text{Ca} \parallel \text{Cl}, \text{NO}_3$ belongs to the most simple reciprocal systems. There are 9 figures, 3 tables, and 10 references, 10 of which

Card 1/2

Reciprocal System of Nitrates and Chlorides of
Sodium and Calcium

SOV/78-3-8-31/48

are Soviet.

ASSOCIATION: Rostovskiy-na-Donu gosudarstvennyy universitet i Luganskiy
gosudarstvennyy pedagogicheskiy institut (State University
Rostov na Donu and the State Pedagogical Institute, Lugansk)

SUBMITTED: July 21, 1957

Card 2/2

11800

²⁴⁰¹¹
S/080/617034/006/014/020
D247/D305

AUTHOR: Kayalova, S.S.

TITLE: The coating of molybdenum with various silicate fusions

PERIODICAL: Zhrurnal prikladnoy khimii, v. 34, no. 6, 1961,
1357 - 1359

TEXT: In recent work on the protection of metals from oxidation the protection of molybdenum has proved most difficult since at 520° molybdenum trioxide is formed which sublimates, thus destroying the metal. Substances containing vitriform bands seemed promising and the aim was to study silicate fusions which would coat the metal successfully. The coating was measured by the resting drop method. An apparatus was made to allow determination of coating in various gaseous media up to 1150°. It consisted of a horizontal vacuum stove with a platinum-rhodium heater. The specimen of metal whose surface irregularities varied from 5-7 μ , was placed in the stove with pieces of the glass under investigation. There was a

Card 1/3

24011

S/080/61/034/006/014/020

D247/D305

The coating of molybdenum ...

vacuum in the stove initially and then an inert gas was introduced. The temperature was raised and the change in shape of the drop observed, the degree of coating being determined either by the contact angle of the drop or the area of fusion spread. For substances giving a good coating the second method was used. The specimen of glass was of uniform volume for comparative purposes. Initial studies were done with silicate fusions with a large content of lead monoxide, due to their low viscosity and surface tension. Results were poor and the addition of various oxides and surface-acting components had little effect. Further work was done on leadless fusions. Study of the influence of cations of groups I-II showed that coating improves with decline in the radius of the cation, i.e. K → Na → Li → Ba → Be. The most interesting results were given by substances containing TiO₃ and B₂O₃ together which form a thin film on the surface of the molybdenum. Substances without these components gave poorer results, though better than with lead. There are 3 figures, 1 table and 10 references: 7 Soviet-bloc

Card 2/3

The coating of molybdenum ...

24011
S/080/61/034/006/014/020
D247/D305

and 3 non-Soviet-bloc. The references to English-language publications read as follows: B. Ellefson, and N. Taylor, J. Am. Cer. Soc. 21, 6, 205, 1938; Michael Humenik, J.K., and William D. Kingery, J. Am. Cer. Soc., 37, 1, 18, 1954.

SUBMITTED: August 30, 1960

Card 3/3

APPEN, A. A. and KAYALOVA, S. S.

"Classification of Oxides According to Their Influence on the Surface Tension of Silicate Melts"

report presented at the Sixth International Congress on Glass, 8-14 Jul 62,
Wash., D.C.

Institute for Silicate Chemistry, Leningrad

S/020/62/145/003/009/013
B101/B144

AUTHORS: Appen, A. A., and Kayalova, S. S.

TITLE: Surface tension of alkali silicate melts

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 145, no. 3, 1962, 592-594

TEXT: The surface tension σ of $\text{Li}_2\text{O-SiO}_2$, $\text{Na}_2\text{O-SiO}_2$, and $\text{K}_2\text{O-SiO}_2$ melts with an M_2O content of 16-45 mole% was measured by drop weight determination (A. A. Appen, Optiko-mekhanicheskaya promyshlennost', no. 3, 7 (1936)), and the effect of the admixture of a second alkali oxide was studied. This method is suited to determine the σ of melts with a viscosity below 3000 poise. Its results are in good agreement with those of other methods (C. W. Parmelee, K. C. Lyon, C. G. Harman, Univ. Illinois Bull., 36, 81, June 6 (1939); L. Shartsis, S. Spinner, J. Res. Nat. Bur. Stand., 46, no. 5, 385 (1951)). Results obtained for $\text{Rb}_2\text{O-SiO}_2$ at 1300°C (first figure being mole% Rb_2O , second figure being σ , erg/cm², third figure being $\Delta\sigma/\Delta t$, erg/cm² °C): 17, 200.1, -0.03; 24, 189.0, -0.045; 40, 146.3, -0.087; and Card 1/2

KAYALOVA, Ye. Ya.

Kayalova, Ye. Ya. - "Complications in births due to narrow pelvis," (Material based on the ten-year period, 1936 - 1945 from the maternity hospital im prof. Snegireva), Collection dedicated to the Maternity Hospital im. Snegireva on its 175th anniversary, Leningrad, 1949, p. 137-44

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949)

2-58-5-12/17

AUTHOR: Kayan, P., Chief of the Oblast' Statistical Administration

TITLE: To Devote More Attention to Initial Registration at Kolkhozes
(Usilit' vnimaniye pervichnomu uchëtu v kolkhozakh)

PERIODICAL: Vestnik Statistiki, 1958, Nr 5, pp 77 - 78 (USSR)

ABSTRACT: In a report, workers of the Statistical Administration of the Vinnitskaya Oblast' pointed to various deficiencies in the initial registration of kolkhoz production and recommended measures for improvement. As a result, district organizations took various measures, such as increasing the book-keeping staff, attaching expert accountants to kolkhozes and convening instructive conferences. Two such conferences were subsequently held, where severe criticisms were expressed towards kolkhoz chiefs who did not maintain established registration orders.

ASSOCIATION: Statisticheskoye upravleniye Vinnitskoy Oblasti (Statistical Administration of the Vinnitskaya Oblast')

AVAILABLE: Library of Congress
Card 1/1

KAYAN, P.L., golovnyy red.; KRASNER, Ya., tekhn.red.

[Principal indexes of the development of the economy of Vinnitsa Province; a statistical manual] Osnovni pokaznyky rozvityku narodnogo hospodarstva Vinnyts'koi oblasti; statystichnyi zbirnyk. Vinnytsia, 1957. 278 p.

(MIRA 11:6)

1. Vinnytskaya oblast'. Statisticheskoye upravleniye. 2. Nachal'nik Statisticheskogo upravleniya Vinnits'koi oblasti (for Kayan)
(Vinnitsa Province--Statistics)

NAVAKATIKYAN, A.O.; KAYAN-YASNYY, V.V.; IOSEL'SON, S.A.; PEVNEY, S.A.

Some data on the effect of the working day on cardiovascular and
neural functions in miners. Fiziol.zhur. (Ukr.) 1 no.4:54-63
(MLRA 9:11)
Jl-Ag '55.

(WORK, effects,
on ECG & nervous system in miners)

(ELECTROCARDIOGRAPHY,
eff. of work in miners)

(NERVOUS SYSTEM, physiology.
eff. of work in miners)

(MINING,
eff. of work on ECG & nervous system in miners)

KAYANDER, M.S.

105-53-5-24/26

Dissertations

ABSTRACT:

For the Degree of Candidate of Technical Sciences.
At the All-Union Scientific Research Institute for Metrology
imeni Mendeleyev (Vsesoyuznyy nauchno-issledovatel'skiy institut
metrologii im. Mendeleyeva)
M.S.Kayander on June 9, 1950 "Studying the Conditions for the In-
crease of the Accuracy of Electrodynamic Equipments at Higher
Frequencies". Official opponents: A.D.Kratirov, Professor, Doctor
of Technical Sciences and I.G.Rusakov, Docent, Candidate of Tech-
nical Sciences.
A.D.Sokolov on May 7, 1954 "Experience Gathered with Respect to
the Control of the Electromagnetic Properties of Dynamo- and
Transformer Steel". Official opponents: N.N.Razumovskiy, Professor,
Doctor of Technical Sciences and N.G.Chernysheva, Candidate of
Technical Sciences.
At the Leningrad Institute of Mining imeni Plekhanov (Leningradskiy
gornyy institut im. Plekhanova)
V.S.Belovidov on June 30, 1953 "On the Selection of an Electric
Drive for Pit Ventilators". Official opponents: F.N.Shklyarskiy,
Professor and A.V.Rys'yev, Docent, Candidate of Technical Sciences.
At the Leningrad Institute for Railroad Engineers imeni Obraztsov
(Leningradskiy institut inzhenerov zheleznodorozhnogo transporta
im. Obraztsova):

Card 2/4

PERIODICAL: Elektrichestvo, 1958, Nr 5, pp. 91-91 (USSR)

KAYANDER, M.S.

KAYANDER, M.S.

Errors in ammeters and voltmeters used in electromagnetic and
electrodynamic systems operated at higher frequencies. Trudy
VNIIM no. 24:8-23 '54. (MIRA 10:12)
(Ammeter) (Voltmeter)

SOV/112-57-5-11173

Translation from: Referativnyy zhurnal. Elektrotehnika, 1957, Nr 5, p 232 (USSR)

AUTHOR: Kayander, M. S.

TITLE: Reference Instrument Current Transformer for 50-10,000 cps
(Obraztsovyy izmeritel'nyy transformator toka dlya diapazona chastot
50-10 000 gts)

PERIODICAL: Tr. Vses. n.-i. in-ta metrologii, 1956, Nr 28, pp 36-49

ABSTRACT: This transformer has been constructed for checking instrument transformers and ammeters used at audio frequencies. All necessary measures for reducing errors have been taken in the transformer design. Calculations and corroborating experiments have shown that within the 50-10,000-cps frequency band and with load resistance of 0.4 ohms or lower, errors do not exceed those permissible for the 0.2 class and are independent of the scheme of connections of primary windings. On the basis of the calculations and experiments, a conclusion is drawn that the above current transformer can be used as a reference transformer for the above frequency band.

R.S.M.

Card 1/1

SOV/115-58-6-22/43

AUTHORS: Gordov, A.N., Brodskiy, A.M., Kayander, M.S., Skragan, A.L.

TITLE: New Apparatus for Checking Thermo-Technical Devices
(Novyye ustavki dlya poverki teplotehnicheskikh priborov)

PERIODICAL: Izmeritel'naya tekhnika, 1958, Nr 6, pp 51-56 (USSR)

ABSTRACT: The All-Union Scientific Research Institute of Metrology imeni D.I. Mendeleyev has developed special devices for the checking of thermo-technical devices. The apparatus UTT-1 is used for checking thermocouples and resistance thermometers. The circuit diagram is shown in Figure 1. The current may be regulated from 4 to 10 ma. The potentiometer R2-A, which has been developed for this apparatus on the base of the potentiometer R2/1, has 3 measuring limits of 1,500, 150 and 15 mv. The apparatus UVPT-1 is used for checking automatic electronic potentiometers, millivoltmeters, devices operating in rheostat and inductive transducers, etc. The circuit diagram is shown in Figure 2. The apparatus has four measuring circuits. The checking of devices with the newly developed apparatus is simpler and faster due to an

Card 1/2

New Apparatus for Checking Thermo-Technical Devices SOV/115-58-6-22/43

efficient arrangement of measuring elements and the use of
the semi-automatic R2-A potentiometer.
There are 4 diagrams.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im.
D.I. Mendeleyeva (All-Union Scientific Research Institute of
Metrology imeni D.I. Mendeleyev)

Card 2/2

BEZIKOVICH, A.Ya.; ZORIN, D.I.; KAYANDER, M.S.

Frequency errors in wattmeters. Trudy VNIIM no.38:103-109
'59. (MIRA 13:4)
(Wattmeter)

PAGE 1 BOOK INFORMATION 507/447

Akademie nauk Ukrainskoy SSR. Institut elektronicheskikh

Topovyy otdel'chee po elektroriforosistemam (Overall Problems of the Electric
Instrument Industry) Kiev, 1960. 262 p., 5,000 copies printed.

Additional Sponsored Agency: Muzchino-tehnicheskoye obshchestvo po radioelektronnoy
tekhnike. Ukrainskoye republikanshchee privately.

Editorial Board: A. D. Matveenko, Corresponding Member Academy of Sciences
Ukrainian SSR (Burg. 22), M. I. Lervits, Doctor of Technical Sciences,
P. P. Chumakov, Candidate of Technical Sciences, V. F. Petrenko, Cand.
of Technical Sciences, A. P. Gorobets, Zuchiger, S. Sh. Zaslavsky,
S. V. Kostyuk, cand. Sc. A. S. Sushchenko, S. G. Polubotok, B. A. Kazantsev, Tech.
Sci.; N. Z. Zarivneva.

Purpose: This book is intended for technical personnel working in the field of
electric measurements (technicians, in electrical instrument plants, in labora-
tories of electric power systems and in electric measurement laboratories of
plants).

Contents: This is a collection of reports presented at a conference on the over-
all development of the Soviet electrical instrument industry held in Kiev on
October 22-27, 1956. The conference was convened by the Institute of Elec-
tronics of the USSR (Institute of Electrical Engineering Academy Sciences
of Ukraine) and the Ukrainian Republikanshchee Pravil'nye po radioelektronnoy
tekhnike (Ukrainian Scientific Association of Radioelectronics).
Topics relating to electrical instruments-making as a
whole (reports by A. D. Matveenko, P. P. Orlovich, Ya. G.
Vasil'ev, V. F. Petrenko, etc.) as well as problems relating to the development of
instrumentation (reports by Yu. A. Arsent'ev, I. E. Khodzhev), the invention of
electronic measuring circuits (A. N. Smirnov, I. Ya. Myrny) and to the
theory and practice of magnetic measurements (N. N. Mol'sev, D. I. Gornostayev).
Attendees the conference were persons of scientific research institutes and
schools of higher education, heads of departments of the main electric
power plants (Vishera, Iskra, Dneproenergo, Dnieperatom, "Kiev",
Chernobyl, Chelyabinsk, Krasnodar, and others) and of various
electric power systems. References are included. Reference also
includes a list of the reports.

M. I. Lervits, T. N. (Incorporated), Frequency Compensation of Electron-
ic Systems Instruments

This article gives formulas of frequency error compensation, the author demon-
strates a method of introducing in a circuit of "compensated" aspect-
ratio sharply reduces the error component.

Litvinenko, A. Yu., B. I. Zaitsev, and M. S. Petrukhin, Frequency Errors
in Oscillators 53
The authors speak of the inhomogeneous character of some oscillators
by the VNIIG (All-Union Scientific Research Institute of Machine
and Metalworking) laboratory of electrical measurements on the
basis of the method of characteristic comparison. Errors caused
by inhomogeneity, annual inhomogeneity and eddy currents, as well as
wattmeter frequency characteristics, and errors of compen-
sation and low frequency factor values are reviewed.

Ogurcov, M. A., Frequency Error Compensation in Electrodynamics Systems
62

In order to establish a method of reducing the optimum parameters of
a voltage-controlled oscillator, the author gives a general expression for vol-
tage-frequency error and equations frequency compensation for two
types of oscillators. There are 2 references, both Soviet.

Sol'tsa, N. I., and A. M. Lyubarskaya, Error Compensation of Voltage Trans-
formers Intended for Operation at Relied Frequencies 83
The authors present data on the levels of which
the error can be reduced in the operation of voltage transformers
for the 100 - 10,000 cycle frequency range with a voltage of 400/100
to 2000/2000 volts.

N. I. Sol'tsa, N. I. Magnetic Oxide-Coated Materials
The authors examine the electromagnetic properties of magnetic
oxide materials worked out by the NII RIFR and compare them with
the properties of magnetic metals of various groups. Low coercive
oxide materials with both high and low permeability, as well as high
coercive non-magnetic materials are discussed.

Card 6/2

S/194/61/000/008/007/092
D201/D304

AUTHORS: Bezikovich, A.Ya., Zorin, D.I. and Kayander, M.S.

TITLE: Frequency errors of wattmeters

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika,
no. 8, 1961, 10, abstract 8 A65 (V sb. Vopr. obshch.
elektropriborostr., Kiyev, AN USSR, 1960, 53-61)

TEXT: A method and equipment has been designed at the
VNIIM im. D.I. Mendeleyev for calibrating ammeters, volt and watt-
meters at the frequency range of up to 20,000 c/s. The designed
equipment is based on the thermo-electrical comparison method. The
calibration accuracy of a.c. at frequencies up to 20,000 c/s is
about 0.1 to 0.2%. The instruments produced for mains frequencies
have been tested over a wide range of frequencies and for some types
additional frequency correction have been determined. Formulae are
given of frequency error terms resulting from inductance, mutual
inductance and eddy currents. Calibrating frequency curves are



Card 1/2

S/194/61/000/008/007/092
D201/D304

Frequency errors of wattmeters

given for several types of instruments. Some types of wattmeters, designed for 50 c/s operation, may be used at up to 500 c/s provided that additional errors do not exceed the value expressing the class of accuracy of the instrument. Recommendations are given on the means of decreasing the frequency errors of small power factor wattmeters. [Abstracter's note: Complete translation] ✓

Card 2/2

S/115/61/000/002/005/006
B116/B203

AUTHOR: Kayander, M. S.

TITLE: Differential apparatus for the checking of radiation pyrometers

PERIODICAL: Izmeritel'naya tekhnika, no. 2, 1961, 23-26

TEXT: The YРN-4 (URP-4) apparatus which is mostly used in the USSR for the calibrating and checking of radiation pyrometers involves very tiresome work; only one standard pyrometer, or four working pyrometers, can be checked during one shift. The author presents a differential method for the checking of radiation pyrometers. The pyrometers to be checked are not gauged one by one as in the apparatus mentioned at the beginning, but simultaneously placed on either side of the light source in such a position that the radiant flux striking them is identical. The difference between the thermo-emf of the pyrometer to be checked and that of the standard pyrometer is directly measured. The circuits of the two pyrometers are connected in a differential circuit. Fig.1 shows the basic circuit diagram of the apparatus. From the light source 3, the light flux passes through

Card 1/3

Differential apparatus for...

S/115/61/000/002/005/006
B116/B203

equal condenser lenses K to the object lenses of the two pyrometers. The two circuits are connected to switch 5; the latter connects them with a d.c. potentiometer. This method simplifies the checking, and avoids the influence of voltage instability (of the light source) on the results of the measurement. A УРД (URD) experimental apparatus was built at the VNIIM according to a design by the design engineers L. S. Levin and L. A. Turchaninova; it was adjusted by the mechanicians A. D. Demkin and L. S. Smirnov. In the center of the apparatus, there is a revolving block of the radiator. It carries a cinema projection lamp which sends the radiant flux through two condenser lenses (attached to bows of the block side-walls) to the object lenses of the two pyrometers. The block can be turned through exactly 180° . The condenser lenses can be shifted along the optical axis of the apparatus. Pyrometers of the VNIIM of the ТЕРА-50 (TERA-50) and РП (RP) types were checked by this experimental apparatus. The calibration curves obtained differed from those on the "black body" by an average of $\pm 4^{\circ}\text{C}$. 65 standard radiation pyrometers were calibrated on the same apparatus. Deviation from the average was 5°C at most. With the use of the "Tara" method (Ref.1) the checking capacity increased by the 10-fold. The principal shortcoming of the URP-4 apparatus (irregularity

Card 2/3

Differential apparatus for...

8/115/61/000/002/005/006
B116/B203

and imperfect blackness) has not been eliminated in the URD apparatus either. Therefore, the telescopes to be checked must be of the same type and mounted under equal conditions. At present, all instruments arriving at the VNIIM are checked on the URD apparatus. There are 2 figures and 1 Soviet-bloc reference.

Legend to Fig.1: 1) Standard pyrometer,
2) condenser lens, 3) light source,
4) pyrometer to be checked, 5) switch,
6) to the potentiometer.

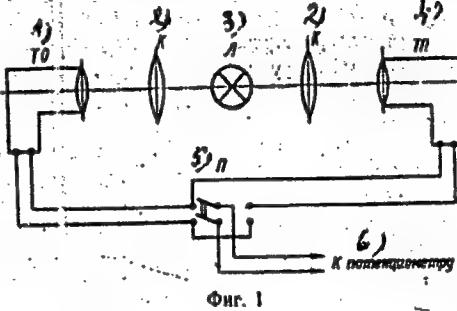


Fig. 1

Card 3/3

S/263/62/000/013/009/015
I007/I207

AUTHORS: Gordov, A. N., Zaborovskaya, Z. U., Kayander, M. S.

TITLE: Apparatus for determining dynamic errors in thermal detectors in temperature measurements under varying heat-transfer conditions

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. 32. Izmeritel'naya tekhnika, no. 13, 1962, 53, abstract 32.13.390. (Tr. in-tov Kom-ta stabdartov, mer i izmerit. priborov pri Sov. Min. SSSR, no. 51 (111), 1961, 185-197)

TEXT: A description is given of test units for determining the errors in measurement of temperature fluctuations of a gas stream by different thermal detectors under varying flow-velocity (and heat-transfer) conditions. One of these test units was used to investigate thermal detectors under conditions of monotone variation of flow temperature and velocity. The temperature of a body immersed in the stream was found to vary according to a law basically different from the law of flow-temperature fluctuations. The other unit was used for similar investigations but with fluctuating flow temperature and velocity. A difference was found between the average temperature-fluctuation level of the thermal detector and that of the stream. Experimental methods are described and basic mathematical relationships are given. There are 8 figures and 4 references.

[Abstracter's note: Complete translation.]

Card 1/1

S/589/61/000/051/007/008
1054/I254

AUTHORS: Gordov, A.N., Zaborovskaya, Z.U., Kayander, M.S.

TITLE: Experimental installation for determining dynamic errors during temperature measurements at transient heat-flux conditions

SOURCE: USSR. Komitet standartov, mer i izmeritel'nykh priborov. Trudy institutov Komiteta. no. 51. (111). 1961. Isledovaniya v oblasti temperaturnykh izmereniy. 185-197

TEXT: A special testing installation was built at VNIM. One rig was used with continuously changing flow rates and temperatures, and another for a pulsating flow. The following three main sources of errors are discussed:
1) thermal inertia of the sensing element and mechanical inertia of the indicating instruments; 2) design of the sensing elements and heat losses through its connections; 3) faulty measurements of heat transfer coefficients due to inconsistent readings of the thermoanemometer. The frequency range of the pulsations was between 0.1 to 1.0 kcps. There are 8 figures.

ASSOCIATION: VNIM

SUBMITTED: November 11, 1959

Card 1/1

KAYANDER, M. S.

Radiator with a high sighting ratio for calibrating radiation
pyrometers. Izm. tekhn. no.10:36-37 0 '62.

(MIRA 15:10)

(Pyrometers) (Calibration)

KAYANDER, M.S.

Simulation of the measurement of variable temperatures. Trudy
inst.Kom.stand.mer i izm.prib. no.71:198-207 '63.

(MIRA 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im.
D.I. Mendeleyeva.

KAYANDER, M.S.

Frequency characteristics of an electronic potentiometer. Izm.tekh.
no.2:17-19 F '64. (MERA 17:4)

KAYANDER, M.S.

Dynamic errors in measuring variable temperatures by a thermoelectric measuring set. Nov. nauch.-issl. rab. po metr.
VNIM no. 3:24-2/ '64 (MIRA 18:2)

KAYANOVICH, V.A.; KOZHEVNIKOVA, Z.I.; MIROPOL'SKAYA, I.L.; MIKHAYLOVA, N.P.;
YADMEYKOVA, A.I.; POMICHEVA, D.N. (Gor'kiy)

Industrial hygiene and the health of women working with benzene.
Gig. truda i prof. zab. 2 no.1:26-31 Ja-F '58. (MIRA 11:3)

1. Institut gigiyeny truda i profzabolvaniy i Meditsinskiy institut.
(BENZENE--TOXICOLOGY)
(LACTATION)

KAYANOVICH, V. A.; KAVALEROVA, S. M.; TROITSKIY, S. A. (Gor'kiy)

Problems in industrial hygiene and the state of health of workers
in benzoyl peroxide production. Gig. truda i prof. zab. no.1:
46-49 '62. (MIRA 15:2)

1. Gor'kovskiy nauchno-issledovatel'skiy institut gigiyeny truda
i profbolezney.

(INDUSTRIAL HYGIENE) (BENZOYL PEROXIDE—TOXICOLOGY)

KAYASHEV, A.V., insh.

Efficiency of large consolidated transportation units. Zhel,dor.transp.
44 no.3:72-75 Mr '62. (MIRA 15:3)
(Railroads, Industrial)

KAYASHEV, A.V., inzh.

Technical and economic efficiency of the routing of shipper's
special destination trains from the loading point. Vest.TSNII
MPS 21 no.8:30-34 '62. (MIRA 16:1)

1. Institut kompleksnykh transportnykh problem.
(Railroads—Making up trains)
(Railroads—Freight)

KAYASHEV, T.T.

Attachment to the PS-10 drive for the automatic switching off
of the lubricant release. Transp. i khran. nefti i nefteprod.
no.10:31-32 '64. (MIRA 17:12)

1. Severo-Zapadnoye nefteprovodnaya upravleniya.

L 46577-66

ACC NR: AR6016246

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AUTHORS: Eydukyavichyus, G.; Kayatskas, A.

2 G

TITLE: Some problems in the application of "optimal bases" for the construction of self organizing systems

SOURCE: Ref. zh. Fizika, Abs. 11Zh121

REF SOURCE: Tr. uchebn. in-tov svyazi. M-vo svyazi SSSR, vyp. 24, 1965, 33-38

TOPIC TAGS: optimal automatic control, self adaptive control, interference immunity

ABSTRACT: The authors consider questions involved in the analysis of noise with the aid of optimal bases, as applied to a self-organizing communication system. Results are presented of experiments on the determination of the interference immunity of signals of various forms when received by an ideal receiver and based on analysis of the noise. The results of the experiments confirm that the optimal bases can find application in self-organizing communication systems. [Translation of abstract]

SUB CODE: 17, 49/

Cord 1/1 hs

AUTHOR: Kayatskas, A. (K.Naumestis) SOV-107-58-4-26/57

TITLE: A Use for Burnt-out Phanotrons (Ispol'zovaniye peregorevshikh gazotronov)

PERIODICAL: Radio, 1958, Nr 4, p 20 (USSR)

ABSTRACT: A burnt-out phanotron can be used instead of a gas-discharge stabililtron. The author used a VG-176 phanotron for stabilizing 140 v.

1. Voltage stabilizers--Equipment 2. Phanotrons--Applications

Card 1/1

KAYAVA, L. I.

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 6,
14-57-6-12646
p 126 (USSR)

AUTHOR: Kayava, L. I.

TITLE: A New Type of Nematode (Metastrongylus tschauricus,
n. sp.) in Georgian Wild Boar (Novyy vid nematody
(Metastrongylus tschauricus, n. sp.) dikoy svin'i iz
Gruzii)

PERIODICAL: Soobshch. AN GruzSSR, 1956, Vol 17, Nr 6, pp 527-530

ABSTRACT: A new type of nematode (Metastrongylus tschauricus,
n. sp.) has been found in the lungs of the wild boar
(Sus scrofa L.) which lives in the Chiaurskiye lesa
(forests), Lagodekhi rayon of Georgia. Of the four
other species of this type of swine parasite, one is
encountered in Kazakhstan, and three are widely spread
all over the USSR.

Card 1/1

I. Ya.

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CIA-RDP86-00513R000721220007-0

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721220007-0"

KAYBANOV, Aleksandr Stepanovich; SMAGORINSKIY, B.S., red.; IZHBOLDINA,
S.I., tekhn.red.

[Handbook on photography] Fotograficheskii spravochnik,
Stalingrad, Stalingradskoe knizhnoe izd-vo, 1961. 127 p.
(MIRA 15:2)
(Photography)

Kay BIEHEU, A.H.

University and State. University USSR. Institute metalurgii	
State, V.P.'s (Committee of the Institute of Metallurgy, USSR Board, Academy of Sciences, USSR), No. 1) Smirnov, 3092, 107 p. Printed, slip inserted. 1,000 copies printed.	
Editorial Board: N.A. Volotskaya (Sergey, M.), Committee of Technical Sciences; A.D. Kishinetsky, Professor; Doctor V.V. Miller, Professor; P.L. Pustovit, Candidate of Technical Sciences; and S.A. Slavutin, Candidate of Technical Sciences. Eds.: M.G. Rumenitsyn.	25
NOTES: This book is intended for students and engineers metallurgists.	
CONTENTS: The book presents results of investigations of theoretical problems in metallurgy and chemistry and gives information on the efficient use of raw materials in practice and methods of synthesis and the development of new products for the metallurgical, and chemical industries. The products were written by junior scientists and experienced specialists of the Scientific Center of Metal Physics of Metallurgy, Chemistry, and Electrotechnology, USSR Bureau, Academy of Sciences, USSR, V.I.P., T.Y. Reproductors and T.S. Logvinchik. Electrical resistivity. Phase Composition of Magnetic Materials During the Melting-Shrinking Process.	29
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KAYBICHEV, A.V., kand. tekhn. nauk

Angular measurement of the amount of metal in barrel-type and teapot spout ladles. Lit. proizv. no.11:37-38 N '65. (MIRA 18:12)

KAYBICHEV, A.V.; CHERNOBROVKIN, V.P.

Melting and overheating of cast iron in cupola furnaces.
Trudy Inst. met. UPAN SSSR no.4:101-106 '58.

(MIRA 12:10)

(Cupola furnaces) (Cast iron)

KAYBICHEV, A.V.; CHERNOBROVKIN, V.P.

Change in the chemical composition and heat capacity of cast
iron during its melting in cupolas. Trudy Inst. met. UFAN
SSSR no.4:107-111 '58. (MIRA 12:10)
(Cupola furnaces) (Cast iron)

CHERNOBROVKIN, V.P.; ANAN'IN, A.A.; DOBRYDEN', A.A.; KAYBICHEV, A.V.

Comparative evaluation of foundry irons of the Ural plants. Lit.
proizv. no. 5:8-10 My '61. (MIRA 14:5)
(Cast iron) (Ural Mountains—Metallurgical plants)

KAYBICHEV, A.V.; CHERNOBROVKIN, V.P.

Lower boundary of the melting zone in cupola furnaces. Lit.
proizv. no.2:17 F '63. (MIRA 16:3)
(Cupola furnaces)

CHERNOBROVKIN, V.P.; ANAN'IN, A.A.; KAYBICHEV, A.V.; DOBRYDEN', A.A.

Gases in foundry iron. Izv.vys.ucheb.zav.; chern.met. 5 no.4;
136-139 '62. (MIRA 15:5)

1. Ural'skiy filial AN SSSR.
(Gases in metals)

KAYBICHEV, A.V.; CHERNOBROVKIN, V.P.

Calculating the overheating of cast iron and position of the
melting zone in cupolas. Izv. vys. ucheb. zav.; chern. met.
5 no.10:137-148 '62. (MIRA 15:11)

1. Institut metallurgii Ural'skogo filiala AN SSSR.
(Cupola furnaces) (Heat--Transmission)

CHERNOBROWKIN, V.P.; KAYBICHEV, A.V.; ANAN'IN, A.A.

Effect of gas removal from cast iron on the structure and
form of graphite. Izv. vys. ucheb. zav.; chern. met. 6 no.4:
136-140 '63. (MIRA 16:5)

1. Ural'skiy filial AN SSSR.
(Gases in metals) (Cast iron—Metallography)

75577
SOV/130-59-10-9/20

18.5000

AUTHOR:

Kaybicheva, M. N.

TITLE:

Magnesia Lining Material With Sintering Additions

PERIODICAL:

Metallurg, 1959, Nr 10, pp 17-18 (USSR)

ABSTRACT:

In the search for better linings for induction furnaces a magnesia mass with ferrous and ferrotitanium additions was tested in a crucible. The chemical composition is shown in Table 1. Based on experimental work the author makes the following recommendations: (1) metallurgical powder "Ekstra" as basic material for crucible lining; (2) magnesite-chrome roofing brick after use in steel-melting furnaces for melting of chromium steel, (3) any of the following mixtures as sintering additions, (a) magnesite - slag - titanium-magnetite concentrate (2.5:2.5:1), (b) raw dolomite - scale to produce dicalcium ferrite and, (c) magnesite and titanium-magnetite concentrate (4:1), (4) Grain composition of the charge-

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Magnesia Lining Material With Sintering Additions SOV/130-59-10-9/20

- 2 to 4 mm fractions: 45 to 50%, 0.088 to 2 mm: 15%, and under 0.088 mm: 35 to 40%, (5) light-weight crucible lid and decreased water supply to inductor after tapping so as to protect lining from drastic temperature changes. The use of magnesia material with sintering additions doubles or triples lining life of induction furnaces. There is 1 table.

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TABLE 1

SOV/130-5-10-9/20

Cylinder No.	Thickness of crucible wall, mm	Charge Composition %,	Chemical Composition, %									
			SiO ₂	Al ₂ O ₃	TiO ₂	Fe ₂ O ₃	FeO	CaO	MgO	Cr ₂ O ₃	MnO	
40	30	Magnesite powder "MPM" (fractions 0 to 4 mm): 90% combined ground magnesite, (45%), open-hearth slag (45%), ilmenite (10%); 10%	4.10	3.03	0.56	0.79	0.97	4.63	82.95	—	0.56	—
50	40	"Ekstra" magnesite powder; 90%, combined ground magnesite, electric furnace slag and ilmenite (2.5:2.5:1.0); 10%	4.17	0.52	0.45	4.88	—	4.29	85.85	—	—	0.13
150	60-80	"Ekstra" magnesite powder; 90%, caustic magnesite; 6.6%, ground magnesite and ilmenite mixture (4:1); 10%	2.00	0.07	3.20	2.33	—	3.26	82.52	—	—	3.70
40	30	"Ekstra" magnesite powder; 90%, ground raw dolomite - scale mixture; 10%	3.52	1.46	NOT determined	2.84	3.19	5.72	83.70	—	—	0.044
300	60-70	Chrome-magnesite; 100%	3.40	6.52	—	9.29	1.22	1.25	62.99	14.20	0.23	—

Card 3/4

Magnesia Lining Material with Sintering Additions

75577
SOV/130-59-10-9/20

ASSOCIATION: Eastern Institute of Refractories (Vostochnyy institut
ogneuporov)

Card 4/4

KAYBICHEVA, M. N.; FADEYEVA, N. I.; Prinimali uchastiye: KOSOLAPOV,
Ye. F.; GILEV, Yu. P.; DRESVIANKIN, V. I.; MIKHAYLOV, V. S.

Studying conditions of service and the character of roof
failure in electric steel smelting furnaces. Trudy Vost. inst.
ognenup. no.2:101-117 '60. (MIRA 16:1)

(Electric furnaces—Maintenance and repair)
(Refractory materials—Testing)

S/131/60/000/04/10/015
B015/B008

AUTHORS: Kaybicheva, M.N., Tulin, N.A., Bastrikov, N.F., Fadeyeva, N.I.

TITLE: Wall-blocks of Electric Steel-melting Furnaces From Scrap of
Magnesite-chromite Bricks

PERIODICAL: Ogneupory, 1960, No. 4, pp. 186-188

TEXT: Experiments with these wall-blocks which were carried out at the Chelyabinsk metallurgicheskiy zavod (Chelyabinsk Metallurgical Plant) are described in the paper under review. The charge was produced by crushing scrap of used magnesite-chromite- and chrome-magnesite bricks. The chemical composition of the experimental charges is given in table 1 and their granulation in table 2. Various grades of steel were smelted in the furnace with magnesite-chromite wall-blocks, the temperature of the metal before tapping being between 1560 and 1640°. It is stated in conclusion that the stability of the magnesite-chromite wall-blocks rammed from scrap is not inferior to that of wall-blocks made from magnesite powder. Various other furnace parts can also be produced from ground scrap of used bricks. The consumption of metallurgical

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Card 1/2

Wall-blocks of Electric Steel-melting Furnaces
From Scrap of Magnesite-chromite Bricks

S/131/60/000/04/10/015
B015/B008

magnesite powder may be reduced by using scrap. There are 2 tables.

Card 2/2

KAYBICHEVA, M.N.

Dust formation in electric furnaces in accelerating the metallurgical process by oxygen. Stal' 20 no.9:809-812 S '69. (MIRA 13:9)
(Electric furnaces) (Oxygen--Industrial applications)

KAYBICHEVA, M.N., TULIN, N.A., BASTRIKOV, N.P., FEDEYEVA, N.I.

Wall blocks of electric steel-smelting furnaces made of magnesite-chromite brick wastes. Ogneupory 25 no.4:186-188 '60. (MIRA 13:8)
(Firebrick--Testing) (Chelyabinsk--Smelting furnaces)

MAMYKIN, P.S.; KAYBICHEVA, M.N.

Manufacture and performance of crucibles of induction furnaces
made of magnesite with sintering additives. Ogneupory 25
no.7:308-312 '60. (MIRA 13:8)

1. Vostochnyy institut ogneuporov.
(Crucibles)

BARIN, Stepan Yakovlevich; KAYBICHEVA, M.N., inzh., retsenzent;
DOVGOFOL, V.I., inzh., red.; DUGINA, N.A., tekhn. red.

[Advice to the steelsmaker] Sovety staleplavil'shchiku. Moskva,
Mashgiz, 1961. 37 p. (Biblioteka raochego-mashinestroitelia.
Seriia: Peredovaia tekhnika -- osnova kommunisticheskogo truda,
no.4) (MIRA 15:6)
(Steel—Electrometallurgy) (Smelting furnaces)